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| Form 1449 | Based on Form PTO-1449 | ATTY. DOCKET NO. VT-2165/02 | APPLICATION SERIAL NO. 10/683643 |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | | FIRST NAMED INVENTOR Barker et al. | |
| | | FILING DATE October 9, 2003 | ART UNIT Unknown |
| Sheet 1 of 5 | | | |

U.S. PATENT DOCUMENTS

| EXAMINER INITIALS | CITE NO. | DOCUMENT NUMBER | PUBLICATION DATE | NAME OF PATENTEE OR APPLICANT | LOCATION WHERE RELEVANT PASSAGES OR FIGURES APPEAR |
|----------------------|-------------|-----------------|---------------------|-------------------------------|--|
| <i>me</i> | AA | US-5,910,382 | 06/08/99 | Goodenough et al. | |
| | AB | US-5,871,866 | 02/16/99 | Barker et al. | |
| | AC | US-5,514,490 | 05/07/96 | Chen et al. | |
| | AD | US-5,296,436 | 03/22/94 | Bortinger | |
| | AE | US-5,262,548 | 11/16/93 | Barone | |
| | AF | US-5,232,794 | 08/03/93 | Krumpelt et al. | |
| | AG | US-4,985,317 | 01/15/91 | Adachi et al. | |
| | AH | US-4,707,422 | 11/17/87 | deNeufville et al. | |
| | AI | US-4,690,877 | 09/01/87 | Gabano et al. | |
| | AJ | US-4,683,181 | 07/28/87 | Armand et al. | |
| | AK | US-4,512,905 | 04/23/85 | Clearfield et al. | |
| | AL | US-4,434,216 | 02/28/84 | Joshi et al. | |
| <i>u</i> | AM | US-4,260,668 | 04/07/81 | Locerf et al. | |

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|----------------------|-------------|-----------------|---------------------|-------------------------------|--|----|
| <i>me</i> | CA | EP 1 094 532 A1 | 4/25/2001 | Sony Corporation | | No |
| | CB | WO 00/57505 | 9/25/2000 | Valence Technology, Inc. | | No |
| | CC | WO 01/53198 | 7/26/2001 | Valence Technology, Inc. | | No |
| <i>u</i> | CD | WO 01/54212 | 7/26/2001 | Valence Technology, Inc. | | No |

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| EXAMINER <i>u m n</i> | DATE CONSIDERED 11/29/04 |
| <p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p> | |

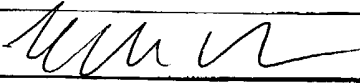
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|----------------------|-------------|-----------------|---------------------|-------------------------------|--|
| CU | AN | US-4,049,891 | 09/20/77 | Hong et al. | |
| | AO | US-4,009,092 | 02/22/77 | Taylor | |
| | AP | US-3,736,184 | 05/29/75 | Dcy et al. | |
| | AQ | US-6,085,015 | 07/04/00 | Armand et al. | |
| | AR | US-5,281,496 | 01/25/94 | Clarke | |
| | AS | US-5,683,835 | 11/04/97 | Bruce | |
| | AT | US-5,512,214 | 04/30/96 | Kaksbang | |
| | AU | US-5,316,877 | 05/31/94 | Thackeray et al. | |
| | AV | US-5,240,794 | 08/31/93 | Thackeray et al. | |
| | AW | US-5,803,947 | 09/08/98 | Engell et al. | |
| | AX | US-5,607,297 | 03/04/97 | Henley et al. | |
| | AY | US-5,384,291 | 01/24/95 | Weimer et al. | |
| W | AZ | US-4,177,060 | 12/04/79 | Tylko | |

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| W | CE | EP 0 680 106 A1 | 11/02/95 | | | Yes |
| | CF | JP 61 263069 | | Mizuno | | Yes |
| | CG | WO 98/12761 | 03/26/98 | | | No |
| W | CH | WO/01024 | 01/06/00 | | | No |

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|----------------------|-------------|-----------------|---------------------|-------------------------------|--|
| <i>W</i> | BA | US- 3,865,745 | 02/11/75 | Block et al. | |
| | BB | US-2,570,232 | 10/09/51 | Hansging | |
| | BC | US-2,508,878 | 05/23/50 | Yates et al. | |
| | BD | US-4,427,652 | 01-1984 | Gaffar | |
| | BE | US-4,460,565 | 07-1984 | Westrate et al. | |
| <i>W</i> | BF | US-4,828,833 | 05-1989 | Cordon | |

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|----------------------|-------------|------------------------|---------------------|-------------------------------|--|-----|
| <i>W</i> | CI | EP 1 049 182 A2 | 11/02/00 | | | Yes |
| | CJ | JP 2001-11-0414 | 04/20/01 | | | Yes |
| | CK | JP 2001-08-5010 | 03/30/01 | | | Yes |
| | CL | JP 9134725 | 05/20/97 | | | Yes |
| | CM | JP 9134724 | 05/20/97 | | | Yes |
| | CN | JP 62176054 (abstract) | 08/01/87 | | | No |
| | CO | JP 56162477 (abstract) | 12/14/81 | | | No |
| | CP | RU 2038395 (abstract) | 06/27/95 | | | No |
| <i>W</i> | CQ | EP 1094533 A1 | 04/25/01 | | | No |

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| EXAMINER INITIALS | CITE NO. | |
|----------------------|-------------|--|
| LC | DA | International Search Report for PCT/US97/15544 |
| | DB | Rangan et al., "New Titanium-Vanadium Phosphates of Nasicon and Langbeinite Structures and Differences Between the Two Structures Toward Deintercalation of Alkali Metal," JOURNAL OF SOLID STATE CHEMISTRY, 109 (1994) pp. 116-121 |
| | DC | Delmas et al., "The Nasicon-Type Titanium Phosphates $ATi_2(PO_4)_3$ (A= Li, Na) as Electrode Materials," SOLID STATE IONICS (1988) 28-30 pp.419-423 |
| | DD | Hagenmuller et al., "Intercalation in 3D-Skeleton Structures: Ionic and Electronic Features," MATERIAL RESOURCES SOCIETY SYMPOSIUM PROC., Vol. 210 (1991) pp. 323-334 |
| | DE | Padhi et al., "Lithium Intercalation into NASICON-Type Mixed Phosphates: ... and $Li_2FeTi(PO_4)_3$," 37 th Power Sources Conference, Cherry Hill, New Jersey, Conference Data, June 17-20, 1996, published October 15, 1996 |
| | DF | Sisler et al., "Chemistry A systemic Approach," OXFORD UNIVERSITY PRESS, p. 746, 1980 |
| | DG | Gopalakrishnan et al., " $V_2(PO_4)_3$: A Novel NASICON-Type Vanadium Phosphate Synthesized by Oxidative Deintercalation of Sodium from $Na_3V_2(PO_4)_3$," CHEMISTRY OF MATERIALS, Vol. 4, No. 4, July/August 1992, pp. 745-747 |
| | DH | Delmas et al., "The Chemical Short Circuit Method, An Improvement in the Intercalation-Deintercalation Techniques," MATERIALS RESEARCH BULLETIN, Vol. 23, 1988, pp. 65-72 |
| | DI | Ivanov-Schitz et al., "Electrical And Interfacial Properties of a $Li_3Fe_2(PO_4)_3$ Single Crystal With Silver Electrodes," SOLID STATE IONICS, 91, (1996), pp. 93-99 |
| | DJ | Cretin et al., "Study Of $Li_{1-x}Al_xTi_{2-x}(PO_4)_3$ for Li+ Potentiometric Sensors," JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, 15, (1995) pp. 1149-1156 |
| | DK | Patent Abstracts of Japan (1994) Vol. 18, No. 64, (Abstract for JP 06251764) |
| | DL | Okada et al., Center for Materials Science & Engineering, University of Texas, Austin, Texas, " $Fe_2(SO_4)_3$ as a Cathode Material for Rechargeable Lithium Batteries." |
| | DM | Adachi et al., "Lithium Ion Conductive Solid Electrolyte," Chemical Abstracts 112 129692 (1981) |
| | DN | Delmas et al., "A Nasicon-Type Phase as Intercalation Electrode: Sodium Titanium Phosphate ($NaTi_2(PO_4)_3$)," MATERIAL RESOURCES BULLETIN (1987) |
| LC | DO | Nanjundaswamy et al., "Synthesis, redox potential Evaluation and Electrochemical Characteristics of NASICON-Related-3D Framework Compounds," SOLID STATE IONICS, 92, (1996) pp.1-10 |
| EXAMINER | | DATE CONSIDERED |

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| MAA | V2908 |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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|---|--------------------------|---|
| ll | DP | Nadiri, "Lithium Intercalation in Lithium Titanium Phosphate ($\text{LiTi}_2(\text{PO}_4)_3$)," C.R. Acad. Sci. Ser. 2 (1987), 304(9), pp 415-418 |
| | DQ | Cotton et al., "Advanced Inorganic Chemistry," 3 rd Edition, INTERSCIENCE PUBLISHERS, pp. 864-868 |
| | DR | Linden, "Handbook of Batteries," 2 nd Edition, MCGRAW-HILL, INC. pp36.4-36.9 |
| | DS | Bykov et al., Superionic Conductors $\text{Li}_3\text{M}_2(\text{PO}_4)_3$ (M= Fe, Sc, Cr): Synthesis, Structure and Electrophysical Properties," SOLID STATE IONICS, Vol.38 (1990) pp. 31-52 |
| | DT | Gummow, et al., "Lithium Extraction from Orthorhombic Lithium Manganese Oxide and the Phase Transformation to Spinel," MATERIALS RESEARCH BULLETIN (1993), 28(12), 1249-56 |
| | DU | Gummow, et al., "An Investigation of Spinel-Related and Orthorhombic LiMnO_2 Cathodes for Rechargeable Lithium Batteries," J. ELECTROCHEM. SOC. (1994), 141(5), 1178-82 |
| | DV | Otsuka, et al., "Hydrogen Production from Water by Indium (III) Oxide and Potassium Carbonate Using Graphite, Active Carbon and Biomass as Reductants," CHEM. LETT. (1981), (3), 347-50 |
| | DW | Vasyutinskii, "Appearance of EMF During Ferric Oxide Reduction by Carbon," ZH. PRIKL. KHIM. (1973) 46(4), 779-82 (Abstract) |
| ll | DX | Gilchrist, Extraction Metallurgy, Pergamon Press (1980, pp. 160-173 |
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